3 Subject matter

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Introduction
This chapter examines the extent to which the European Union (‘EU’), in the field of copyright or droit d’auteur,\(^1\) has adopted harmonized notions of subject matter and whether a unified approach to determining protectable subject matter should be adopted in the future. The discussion occurs in several sections. Sections 1 and 2 set the scene by addressing the international position under the Berne Convention for the Protection of Literary and Artistic Works 1886 (‘Berne’) and the basic differences between EU Member States. Section 3 discusses the EU harmonization of copyright law protection of subject matter to date, while Section 4 assesses the extent to which this harmonization has been successful. Finally, Section 5 analyses whether further harmonization should occur, in particular, in respect of the definition of computer programs, and whether there should be a unified ‘open list’ or ‘closed list’ approach.

1. International position
In considering the scope of subject matter protected by copyright or droit d’auteur the logical starting point is, of course, Berne. Article 2(1) of Berne stipulates that ‘the expression “literary and artistic works” shall include every production in the literary, scientific and artistic domain, whatever may be the mode or form of its expression’ and goes on to provide an extensive but non-exhaustive list of examples. Some of the more notable works listed are: books, lectures, dramatic works, musical compositions, cinematographic works, paintings, sculptures, photographic works, and works of applied art. The principles of national treatment and minimum rights set out in Article 5(1) of Berne apply ‘in respect of works for which [authors] are protected under this Convention’. As such, the scope of Article 2(1) of Berne is crucial to determining whether or not Union Members come under an obligation to grant national treatment and minimum rights.\(^2\)

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\(^1\) NB: this chapter is not concerned with subject matter that falls within related rights or neighbouring rights regimes.

The phrase ‘every production in the literary, scientific and artistic domain’ apparently harks back to the bilateral treaties that preceded the signing of Berne.3 Relying on the travaux préparatoires for the Brussels Revision Conference, Professors Ricketson and Ginsburg argue that the word ‘production’ merely indicates that a work which satisfies the description of ‘literary and artistic works’ will ‘be protected once it [is] realized or brought into existence’.4 Further, that the adjective ‘scientific’ in this phrase is superfluous, given that scientific discoveries would not be protected under Berne (being ideas and not expression) and scientific writings would be classified as either literary or artistic productions.5 The fact that literary, scientific and artistic productions are protected ‘whatever may be the mode or form of its expression’ highlights three things. The first is that a technology neutral approach is taken to how the work is expressed. Second, that protection is for the expression as opposed to the ideas embodied in the works6 and, finally, that the mode or form of expression does not have to be tangible (a point which is also emphasized by Article 2(2) of Berne).

As mentioned above, Article 2(1) enumerates categories of works that are included within the notion of ‘literary and artistic works’. It is clear from Article 2(6) of Berne that the works listed in Article 2(1), along with those mentioned in Article 2(3) (‘translations, adaptations, arrangements of music and other alterations of a literary and artistic work’) and Article 2(5) (‘collections of literary or artistic works’), are to be protected under the Convention by Union Members. Although the enumeration in Article 2(1) is not exhaustive, and other categories of works may be recognized as ‘literary and artistic works’, history shows that the list has steadily expanded over time and that ‘there has usually been a prolonged struggle which has preceded the admission of a new category of work to the list’.7 This is because enumeration in Article 2(1) of Berne is the only mechanism by which a consistent approach among Union Members concerning what is included within the notion of ‘literary and artistic works’ can be ensured.8 Even so, the absence of definitions of the works listed in Article 2(1) leaves open the possibility of differing interpretations in the national laws of Union Members.9

3 Ibid., paras 8.02, 8.06.
4 Ibid., para 8.03.
5 Ibid., para 8.06.
6 Ibid., para 8.07 write that confirmation of this basic principle is found in Article 2(8) of Berne which excludes ‘news of the day’ and ‘miscellaneous facts having the character of mere items of press information’ from its scope.
8 Ibid., para 8.11.
9 Ibid., para 8.12 argue that ‘[s]ignificant variations will be the exception and will usually only occur at the margin’.
As new technologies emerged, debates arose over whether ‘literary and artistic works’ in Article 2(1) of Berne embraced new types of subject matter, such as phonograms (i.e. sound recordings), broadcasts, performances, computer programs and databases. Attempts to bring phonograms, broadcasts and performances within the scope of Article 2(1) of Berne failed and led to the establishment of a separate international regime in the form of the International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations 1961. Phonograms and broadcasts were not treated as ‘literary and artistic works’ within Article 2(1) of Berne because they were considered industrial works, which lacked the right creative activity, and because broadcasts, being created by legal entities, lacked an ‘author’. Performances were denied protection under Berne on the basis that performers did not create works, but rather interpreted them.

Whether ‘computer programs’ qualified as ‘literary works’ within Article 2(1) of Berne was a contentious issue for several years. At an international level, WIPO, under the aegis of the Paris Union, dismissed patent law protection of computer programs in favour of a sui generis regime and in 1977 formulated a set of Model Provisions for the Protection of Computer Software. This showed that, initially at least, WIPO considered copyright law as an inappropriate vehicle for protecting computer programs. Subsequently, however, and beginning at the national level, there was a shift towards protecting computer programs as literary works. The reasons for doing so have been described as heavily pragmatic – the lobbying efforts of software manufacturers to obtain quick and effective protection combined with the fact that copyright law represented an established and ‘ready-made’ solution, for which the benefit of national treatment and minimum rights could

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10 For further discussion see ibid., paras 8.110–8.114.
12 Ibid., 601.
be claimed. In view of the declining international interest in a *sui generis* model of protection, in February 1985 WIPO moved the issue of protection of computer programs to the ‘competence’ of the Berne Union and subsequently produced a study on the legal protection of computer programs, surveying national legislation and case law. In November 1991, the first session of the Berne Protocol Committee was held and the arguments for and against copyright protection were raised in the working paper prepared for that meeting. Objections were raised to classifying computer programs as literary works. It was argued that while source code is superficially analogous to literary works, machine code is not, and the final addressee of the instructions is a computer (which then carries out a function) and not an individual. Further, that computer programs lack the intellectual creativity required for ‘literary and artistic works’ and that the length of protection (50 years *post mortem auctoris*) is excessive for works with such a short life cycle. Counter-arguments, however, were raised. First, that computer programs are writings and should be protected provided they are intellectual creations. Further, that there is sufficient room for creativity in making computer programs. The fact that computer programs are in object code should not preclude their protection since other literary and artistic works may be stored in computer systems as machine readable code. Finally, that while the duration of protection may be too long, objections of this nature may be raised for other types of subject matter that qualify as ‘literary and artistic works’. The concerns about treating computer programs as copyright subject matter gradually disappeared over time, so that Article 4 of the WIPO Copyright Treaty 1996 (‘WCT’) now clarifies that computer programs are protected as literary works within the meaning of Article 2 of Berne. This shift in approach is probably accounted

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17 Ibid., pp. 472–3.


19 Although there is some debate over whether Article 4 is declarative of what
for by a multiplicity of reasons: the pragmatic ones mentioned above; the counter-arguments to the principled objections; and finally, the acceptance at national level of computer programs as ‘literary works’ which then became entrenched at a regional level in the EU Software Directive20 and accepted at an international level in Article 10(1) of the Agreement on Trade Related Aspects of Intellectual Property Rights (‘TRIPS’) 1996.

Another contentious issue was whether or not the reference in Article 2(5) of Berne to ‘collections of literary or artistic works’ included compilations of data, that is, databases. It seemed not, given that the provision explicitly referred to collections of works as opposed to data or other non-copyrightable subject matter.21 That said, Professors Ricketson and Ginsburg argue that if the selection or arrangement of data satisfies the requirement of ‘intellectual creation’ then such collections should come within Article 2(1) of Berne.22 Further, that subsequent state practice supports the inclusion of compilations of data within Article 2. In any event, the TRIPS Agreement and WCT have resolved this issue.23 Article 10(2) of TRIPS provides:

Compilations of data or other material, whether in machine readable or other form, which by reason of the selection or arrangement of their contents constitute intellectual creations shall be protected as such. Such protection, which shall not extend to the data or material itself, shall be without prejudice to any copyright subsisting in the data or material itself.

Article 5 of the WCT is in virtually identical terms and the Agreed Statement confirms that the scope of protection for compilations of data it sets out is consistent with Article 2 of Berne.24 Two further preliminary points should be mentioned. The first is that a requirement of ‘originality’ is not expressly included in Berne. Rather, the travaux préparatoires for the Brussels Revision Conference indicate that the requirement of ‘intellectual creation’ is implicit in the concept of ‘literary and

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22 Ibid., para 8.89.
artistic work’. This view is arguably reinforced by the fact that Article 2(5) expressly refers to ‘collections of literary or artistic works’ being ‘intellectual creations’ by virtue of the ‘selection and arrangement of their contents’. Professors Ricketson and Ginsburg argue that ‘while such a stipulation is necessary in the case of these kinds of borderline works, it hardly needs to be stated in relation to the “mainline” works covered by article 2(1)’. There is, however, very little guidance on what constitutes ‘intellectual creation’ and, as a result, Union Members may (and do) differ in their approach to what minimum standard of originality is required. The second point concerns whether or not there is a fixation requirement. As discussed above, the fact that productions in the literary, scientific and artistic domain are protected ‘whatever may be the mode or form of its expression’ means that there is no requirement that the expression be in a tangible form. This is reinforced by the fact that the enumeration in Article 2(1) refers to ‘lectures, addresses and sermons’. However, Union Members have long differed in their approach to whether fixation is a requirement of protection and the Stockholm-Paris Revisions of Berne saw the inclusion of Article 2(2), which leaves this question to the national laws of Union Members.

2. EU Member States

Before discussing EU harmonization of copyright subject matter, it is important briefly to point out the main differences in approach between Member States. Here the differences are aligned according to the distinction between common law and civil law systems. The UK is a prime example of a common law system and adopts, via the Copyright Designs and Patents Act 1988 (‘CDPA’), what is commonly known as a ‘closed list’ approach to subject matter. The CDPA grants protection to eight – and only eight – categories of works. As such, a person must bring his or her creation within one of these categories in order to obtain copyright – failure to do so will preclude protection.

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25 Ricketson and Ginsburg (2006), para 8.03.
26 Ibid.
27 ‘It shall, however, be a matter for legislation in the countries of the Union to prescribe that works in general or any specified categories of works shall not be protected unless they have been fixed in some material form.’
28 For discussion see Ricketson and Ginsburg (2006), para 8.18.
29 Ireland is the only other example in the EU.
30 A ‘closed list’ approach is not necessarily distinctive of common law systems since the United States, for example, adopts an open list in section 102(a) of US Copyright Act 1976.
31 Literary, dramatic, musical and artistic works, sound recordings, films, broadcasts and published editions – s1(1) CDPA.
32 As is famously evidenced by Creation Records v News Group Newspapers [1997] EMLR 444.
The scope of the categories in the CDPA is elaborated upon, in varying degrees, via statutory definitions. Some definitions are exhaustive in nature, such as that for ‘artistic work’, which is stated in section 4 of the CDPA to mean:

(a) a graphic work, photograph, sculpture or collage, irrespective of artistic quality,
(b) a work of architecture being a building or model for a building, or
(c) a work of artistic craftsmanship.

‘Graphic work’, ‘sculpture’ and ‘building’ are further defined, but in inclusive terms, and thus have required judicial elaboration. For example, ‘graphic work’ is defined to include paintings and facial make-up has been rejected as a painting. 33 Engravings are also classed as graphic works and have been interpreted broadly by the courts to include industrial items, such as Frisbees, and their moulds, 34 and metal plates for the manufacture of rubber car mats. 35 ‘Sculpture’ is defined to include ‘a cast or model made for the purposes of sculpture’ and again we see courts adopting a wide interpretation of this sub-category in order to protect works of an industrial nature. 36 ‘Photograph’ is defined in section 4(2), but in exhaustive (and also technology neutral) 37 terms.

‘Musical work’ is defined exhaustively in section 3(1) as ‘a work consisting of music, exclusive of any words or action intended to be sung, spoken or performed with the music’, but it is immediately apparent that the definition provides little guidance, apart from highlighting that music and lyrics are to be separately protected. As such, courts have been forced to supply the content of the definition by interpreting what constitutes ‘music’. Thus, in Sawkins v Hyperion Records 38 Mummery LJ held that:

In the absence of a special statutory definition of music, ordinary usage assists: as indicated in the dictionaries, the essence of music is combining sounds for listening to. Music is not the same as mere noise. The sound of music is intended to produce effects of some kind on the listener’s emotions and intellect. The sounds may be

35 Hi Tech Autoparts Ltd v Towergate Two Ltd (No. 2) [2002] FSR 16.
36 A wooden prototype of a Frisbee was protected as a sculpture in Wham-O Manufacturing Co v Lincoln Industries [1985] RPC 127 and in Breville Europe Plc v Thorn EMI Domestic Appliances Ltd [1995] FSR 77 plaster casts of a sandwich maker were regarded as a sculpture.
38 [2005] RPC 32.
produced by an organised performance on instruments played from a musical score, though that is not essential for the existence of the music or of copyright in it.\textsuperscript{39} (Emphasis added)

Other categories are defined inclusively, but minimally so. For example, section 3(1) of the CDPA defines a ‘dramatic work’ to include ‘a work of dance or mime’. Thus, it has been left to the courts to develop a judicial definition of dramatic work as a ‘work of action, with or without words or music, which is capable of being performed’\textsuperscript{40} and in \textit{Norowzian v Arks (No 2)}\textsuperscript{41} the Court of Appeal held that this definition embraced cinematographic works. Other inclusive definitions are more helpful, as is the case with ‘literary work’, which is defined in section 3(1) of the CDPA to mean ‘any work, other than a dramatic or musical work, which is written, spoken or sung’ and to include computer programs, preparatory design material for computer programs, databases and tables or compilations other than databases. Nevertheless, courts have resorted on occasions to a general test for what constitutes a ‘literary work’ – that it provides ‘instruction and information, or pleasure, in the form of literary enjoyment’\textsuperscript{42} regardless of its literary quality\textsuperscript{43} and have had to ascertain the boundaries of what is a computer program in terms of whether or not it encompasses language commands.\textsuperscript{44}

Another important feature of UK copyright law is that, for literary, dramatic and musical works, copyright does not subsist ‘unless and until it is recorded, in writing or otherwise’.\textsuperscript{45} ‘Writing’ is defined broadly in section 178 of the CDPA to include ‘any form of notation or code . . . regardless of the method by which, or medium in or on which, it is recorded’ and it is not essential that the author records the work or gives his or her permission for it to be recorded.\textsuperscript{46} For artistic works, there is no express requirement of fixation but English courts’ interpretation of this category arguably has led to this being an implied requirement of certain types of artistic work. For example, in \textit{Merchandising Corporation of America v Harpbond}\textsuperscript{47} the fact that facial

\begin{itemize}
\item \textsuperscript{39} \textit{Sawkins v Hyperion Records} [2005] RPC 32, para 53.
\item \textsuperscript{40} \textit{Norowzian v Arks Ltd (No.2)} [2000] FSR 363 at 367 per Nourse LJ (Brooke LJ at 368 and Buxton LJ at 369 in agreement).
\item \textsuperscript{41} [2000] FSR 363.
\item \textsuperscript{42} \textit{Exxon v Exxon Insurance} [1982] Ch 119 at 143 per Stephenson LJ, 144 per Oliver LJ (Sir David Cairns in agreement) following and applying the test stated by Davey LJ in \textit{Hollinrake v Truswell} [1894] 3 Ch 420, 428.
\item \textsuperscript{43} See \textit{University of London Press v University Tutorial Press} [1916] 2 Ch 601 at 608 per Peterson J.
\item \textsuperscript{44} \textit{Navitaire Inc v Easyjet Airline Co Ltd (No 3)} [2006] RPC 3.
\item \textsuperscript{45} S3(2), CDPA.
\item \textsuperscript{46} S3(3), CDPA.
\item \textsuperscript{47} [1983] FSR 32.
\end{itemize}
make-up lacked permanence was an important factor in the Court of Appeal’s rejection of it being classified as a ‘painting’.48 Likewise, in *Creation Records v News Group Newspapers*49 the fact that the assembly of objects was ‘intrinsically ephemeral’ was significant in Lloyd J’s rejection of it as a collage.50

Finally, it is worth noting that under the CDPA entrepreneurial works, such as sound recordings, broadcasts and published editions, are classified as copyright works.51 However, they are not subject to an originality requirement in the same way as authorial works.52 Instead, they cannot be copied from a previous work of the same kind.53 Further, they have a narrower scope of protection than that available to authorial works.54

France, as the *par excellence* of the droit d’auteur systems, provides an appropriate contrast with the UK. Article L112-1 of the Intellectual Property Code (‘IPC’) protects ‘the rights of authors in all works of the mind, whatever their kind, form of expression, merit or purpose’. Article L. 112-2 then goes on to provide an illustrative list of ‘works of the mind’ that largely corresponds to Article 2 of Berne, but has some additional illustrations, namely, that of software and its preparatory design material and ‘creations of the seasonal industries of dress and articles of fashion’. Three immediate differences from the UK approach are apparent. The first is that aside from this illustrative enumeration of ‘works of the mind’ there are no statutory definitions of what can or cannot constitute protectable subject matter. The second contrast is that only authorial works attract authors’ rights – entrepreneurial works are protected by the neighbouring rights provisions in Book II of the IPC. The final difference is that fixation is not a requirement for subsistence of copyright, given that Article L112-1 refers to ‘works of the mind, whatever their kind, form of expression, merit or purpose’.55 There is, however, a twist represented by Article L112-1, which refers to ‘choreographic works, circus acts and feats and dumb-show works, the acting form of which is set down in writing or in other manner’. Commentators have taken the view that the reference to fixation is as a means of proving the existence of the work, rather than determining subsistence of protection.56 Certainly, this was the position of

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48 Ibid., at 46.
50 Ibid., at 450.
51 See s1(1)(b) and (c) and 1(2), CDPA.
52 See ss1(1)(a) which refers to original literary, dramatic, musical or artistic works.
53 See s5A(2) for sound recordings and 5B(4) for films.
54 For films see *Norowzian v Arks (No 1)* [1998] FSR 394, 400.
55 Emphasis added.
France at the Brussels Revision Conference when a proposal to delete a similar provision from Article 2 of Berne (originally inserted at the Berlin Revision Conference) was made.\textsuperscript{57} The reference to ‘merit or purpose’ highlights that value judgments (whether moral or aesthetic) should not be made in determining whether something is a ‘work of the mind’ and that it is irrelevant whether or not the purpose of the work is useful/industrial or artistic.\textsuperscript{58}

The ‘open list’ approach to subject matter, together with the absence of a fixation requirement and the irrelevance of the merit or purpose of the work, arguably facilitates flexibility and enables the inclusion of works of contemporary art,\textsuperscript{59} along with new technological creations.\textsuperscript{60} There are various examples of works that have been protected under French droit d’auteur – for example, the scent of a fragrance,\textsuperscript{61} a bouquet of flowers,\textsuperscript{62} and the Pont-Neuf wrapped by Christo and Jeanne Claude\textsuperscript{63} – that would not have qualified for protection under UK law. An issue to which we will return in Section 5 is whether or not it would be desirable for there to be unification of this core conceptual difference in approach.

3. European harmonization thus far

Three EU Directives have sought to harmonize copyright law protection of specific subject matter. These are the Software,\textsuperscript{64} Database\textsuperscript{65} and Term\textsuperscript{66}
Directives. The Term Directive will not be discussed here given that it does not harmonize the subsistence requirements of photographs, cinematographic works or fixation of films, except to clarify in Article 6 that original photographs, that is, those which are the result of an ‘author’s own intellectual creation’, should be protected for 70 years post mortem auctoris.\(^{67}\)

**Software Directive**

Turning first to the Software Directive, we see from Article 1(1) that Member States must protect computer programs as literary works within the meaning of Berne and that the term ‘computer program’ shall include preparatory design material. As elucidated by recital 7, this means ‘preparatory design work leading to the development of a computer program provided that the nature of the preparatory work is such that a computer program can result from it at the later stage’. Article 1(2) states that protection extends ‘to the expression in any form of a computer program’, but not to the ideas and principles underlying any element of a computer program. An originality requirement is stipulated in Article 1(3), namely, that the computer program is the ‘author’s own intellectual creation’. Thus, we see that, at the subsistence level, harmonization really only occurred in respect of the originality threshold.\(^{68}\) Aside from stipulating that a computer program includes preparatory design material, there was no attempt to provide a harmonized exhaustive definition of what constitutes a computer program.

**Database Directive**

By contrast, the Database Directive does provide a harmonized definition of ‘database’, for the purposes of both copyright and also sui generis protection. Article 1(2) of the Database Directive defines ‘database’ to mean: ‘a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means’. From this definition it is apparent that a database may comprise a wide range of material. This is supported also by recital 17, which states that databases include ‘literary, artistic, musical or other collections of works or collections of other material such as texts, sounds, images, numbers, facts, and data’. Further, both electronic and non-electronic databases are embraced.\(^{69}\)

\(^{67}\) Also, it is addressed in detail elsewhere in this volume.


\(^{69}\) In the original and amended proposals of the Database Directive the definition was initially restricted to electronic databases. However, this distinction was removed, the Council, in its Common Position, indicating that it was inappropriate for the same database to enjoy different standards of protection, based on whether it was
Importantly, Article 1(3) of the Database Directive states that protection under the Directive ‘shall not apply to computer programs used in the making or operation of databases accessible by electronic means’. Thus, the protection of computer programs and databases would appear to be mutually exclusive. However, it may be queried whether it is possible easily to distinguish between a computer program and a database, especially when there is no definition of ‘computer program’ within the Software Directive and recital 20 of the Database Directive indicates that ‘material necessary for the operation or consultation of certain databases such as thesaurus and indexation systems’ may be protected. Another tension is that the broad definition of ‘database’ is such that data stored within a computer program and crucial to the program’s operation may be protected. Mark Davison argues that it is inappropriate to protect data within a computer program in this manner because ‘the recitals suggest that there is no intention to increase or alter the existing protection provided by copyright to computer programs or parts of them’. Further, he argues that data in a computer program are only there to help the program function, and do not instruct or inform a person, yet the purpose of the Database Directive arguably is ‘to improve investment in the generation and processing of information and modern information processing storage and processing systems’.

Guidance as to what qualifies as a ‘database’ is provided by recitals of the Database Directive, along with the ruling of the ECJ in *Fixtures Market Ltd v Organismos prognostikon agonon podosfairou AE (‘OPAP’)*. A database must comprise ‘independent’ works, data or other materials. Recital 17 of the Database Directive sheds some light on the meaning of ‘independent’ by stipulating that ‘a recording or an audio visual, cinematographic, literary or musical work as such does not fall within the scope of this Directive’. In other words, works *per se* will not constitute databases – there must be *collections* of works. It seems that ‘independent’ requires a conceptual or logical independence, in the sense that a work is capable of having the same meaning both inside and outside the collection, as opposed to relying on the surrounding

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71 Ibid., p. 71.
72 Ibid., p. 71.
73 C-444/02, *Fixtures Market Ltd v Organismos Prognostikon Agnon Podosfairou (OPAP)* (Grand Chamber, 9 November 2004).
context for its meaning. This interpretation finds support in the ECJ’s ruling in *OPAP*. This case involved football fixture lists produced by the Football Association Premier League Ltd and the Football League Ltd in England and the Scottish Football League in Scotland. The fixture lists were exploited by Football Fixtures Ltd within the UK and outside the UK by Fixtures Marketing Ltd. Fixtures Marketing complained that OPAP had infringed its *sui generis* right in the fixture lists by repeatedly extracting a substantial number of fixtures and placing them on its websites to facilitate betting activities. The single-judge Court of First Instance, Athens, stayed proceedings and referred three questions to the ECJ. Questions 1 and 2 sought preliminary rulings on the definition of database and whether or not the football fixture lists enjoyed protection as databases. The ECJ ruled that ‘independent’ materials refers to materials ‘which are separable from one another without their informative, literary, artistic, musical or other value being affected’. The Court indicated that football fixture lists contained ‘independent’ materials because the date and time of fixtures, along with the identity of the two teams playing, had ‘autonomous informative value’. A consequence of this interpretation is that multimedia video games will not qualify as a database, nor will multimedia works which combine reference qualities with the use of moving user interfaces. However, reference type multimedia works will have no difficulty in satisfying this aspect of the definition of ‘database’.

Works, data or other materials must also be ‘arranged in a systematic or methodical way’. Recital 21 of the Database Directive makes it clear that ‘it is not necessary for those materials to have been physically stored in an organized manner’. In other words, the arrangement refers to conceptual arrangement (or presentation) of the contents to the user. This view is also supported by the following comment of the ECJ in *OPAP*:

While it is not necessary for the systematic or methodical arrangement to be physically apparent, according to the 21st recital, that condition implies that the collection should be contained in a fixed base, of some sort, and include technical means such as electronic, electromagnetic or electro-optical processes, in the terms of the 13th recital of the preamble to the directive, or other means, such as an index, a table of contents, or a particular plan or method of classification, to allow the retrieval of any independent material contained within it.

In *OPAP* the ECJ held that the conditions of systematic and methodical arrangement and individual accessibility of the constituent materials were met.

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74 *OPAP*, para 29.
75 *OPAP*, para 33.
76 *OPAP*, para 30.
by the arrangement of the data according to ‘dates, times and names of teams in those various football matches’. Thus, it appears that the requirement of ‘systematic or methodical arrangement’ will be relatively easy to satisfy, provided the collection is not haphazard in nature.

The requirement that ‘works, data or other materials’ be ‘individually accessible by electronic or other means’ is the final and perhaps most perplexing aspect of the definition of ‘database’. A literal interpretation of ‘individually accessible’ would require independent works, data or other materials to be separately retrievable. Although support exists for this literal interpretation, it is problematic because it would exclude certain hard copy databases that are archetypal examples of databases. For example, a hard copy telephone directory is an archetypal database, and yet the independent data (i.e. names and telephone numbers) within a telephone directory are not separately retrievable since they are listed alongside one another. The same may be said for trade catalogues or football fixture lists. With these sorts of collections, data may be separately viewed insofar as they are visually distinct from other data. However, the data cannot be separately accessed or retrieved.

A more sensible interpretation of the requirement of ‘individual accessibility’ is to consider it in tandem with the requirement that works are arranged systematically or methodically. The ECJ in OPAP appeared to take this approach, in reaching the conclusion that ‘[t]he arrangement, in the form of a fixture list, of the dates, times and names of teams in those various football matches meets the conditions as to systematic or methodical arrangement and individual accessibility of the constituent materials of that collection’. Thus, it is argued that ‘individual accessibility’ means that the collection must be in a searchable form and that the materials within can be viewed distinctly, as

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77 OPAP, para 35.
80 The same may be said for electronic telephone directories, such as www.yell.com and www.whitepages.com.au, where a search for particular data can produce the data sought alongside other data that are a near match. Where this happens the data may be viewed distinctly, but it is not, strictly speaking, correct to say that they have been separately retrieved.
81 OPAP, para 35.
opposed to being separately retrievable. A work will be ‘individually accessible’ if it is possible to search for the work (whether that is by keyword, alphabetical arrangement or otherwise) and perceive it, even if the work is viewed alongside other material. Under this interpretation multimedia video games would be excluded (because the materials within are not searchable), but multimedia works which present their constituent inputs in an integrated manner should fall within the definition of ‘database’ provided they have a search function. Reference type multimedia works should have no difficulty in showing that their constituent inputs are individually accessible according to this interpretation.

4. Success of harmonization
As discussed in the previous section, there has been limited harmonization of what constitutes copyrightable subject matter under EU law. This section considers the success so far of this partial harmonization.

Software
According to a Report from the European Commission, it seems that all Member States have implemented the requirement that ‘computer programs’ be protected as literary works. The vast majority of Member States have also included preparatory design materials as a ‘computer program’. For example, the German Copyright Law (Urheberrechtsgesetz) 1965, Article 69(a) defines ‘computer program’ as ‘programs in any form, including their design material’. However, this is not the case for the UK where section 3(1) of the CDPA defines ‘literary work’ as including a computer program (section 3(1)(b)) and preparatory design materials for a computer program (section 3(1)(c)). In other words, preparatory design materials are not treated as a computer program but as a sub-category of literary work. The European Commission took the view, however, that this did not make the UK non-

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82 Also in support see Laddie et al, *The Modern Law of Copyright and Designs* 3rd edn (London: Butterworths, 2000), para 30.24, who argue that in order to satisfy the requirement of ‘individually accessible’ it is not necessary completely to exclude the other contents of the database from view since to follow such an interpretation would impose too strict a requirement and would exclude many paper databases.


compliant with the Software Directive.\textsuperscript{85} Even so, oddities might arise when it comes to applying the exceptions that are specific to computer programs\textsuperscript{86} since these refer only to computer programs and not preparatory design materials. Denmark and Finland have not defined ‘computer programs’ to include preparatory design materials; however, the Commission has commented that no difficulties appear to have arisen in practice because of this omission.\textsuperscript{87}

In the UK, the scope of what constitutes a ‘computer program’ was clarified in \textit{Navitaire v Easyjet Airline Co}\textsuperscript{88} where Pumfrey J considered whether copyright subsisted in the individual word commands, complex commands and collections of complex commands in a computer program.\textsuperscript{89} Single words in isolation (i.e. word commands) were held not to be ‘literary works’. Further, Pumfrey J held that complex commands were a type of computer language and were not protectable since recital 14 of the Software Directive indicated that to the extent that programming languages comprised ideas and principles they were not protected.\textsuperscript{90} Compilations of complex commands were also held to be a computer language that was not protected.\textsuperscript{91} Alternatively, that the collection of command names and syntax was not a compilation but merely an accretion of commands.\textsuperscript{92}

The exclusion of ideas and principles underlying elements of a computer program from being protected by copyright was not implemented in the statutory language of eight Member States. This did not, however, concern the Commission since it took the view that it was standard practice to apply the idea/expression dichotomy as a principle of copyright law.\textsuperscript{93} The requirement that expression in any form of a computer program shall be protected was not implemented in some Member States and the Commission indicated that it was unsure what effect this had had on the protection of computer programs in

\textsuperscript{85} Software Report, p. 9.
\textsuperscript{86} See ss50A–50C, CDPA.
\textsuperscript{87} Software Report, p. 9.
\textsuperscript{88} [2006] RPC 3 (‘\textit{Navitaire’}).
\textsuperscript{89} \textit{Navitaire}, paras 80, 87–8.
\textsuperscript{90} ‘In my view, the principle extends to ad hoc languages of the kind with which I am here concerned, that is, a defined user command interface. It does not matter how the “language” of the interface is defined. It may be defined formally or it may be defined only by the code that recognises it. Either way, copyright does not subsist in it. This is of course not to suggest that the expression of a program in a particular language is not entitled to copyright. Quite the reverse. What this recital, and the associated dispositive provision of Art. 1(2), appear to be intended to do, is to keep the language free for use, but not the ideas expressed in it.’ \textit{Navitaire}, para 88.
\textsuperscript{91} \textit{Navitaire}, para 92.
\textsuperscript{92} Ibid.
\textsuperscript{93} Software Report, p. 9.
those Member States. Finally, the threshold originality requirement of ‘author’s own intellectual creation’ was not explicitly incorporated into six Member States’ laws (the UK being one of the culprits), those states arguing that it was an implied condition of their laws. The Commission, however, took particular issue with the UK on the basis that it has a lower general standard of originality – that of ‘labour, skill and judgment’ – and the fact that ‘author’s own intellectual creation’ was specifically incorporated for databases. According to the Commission, it ‘remains to be seen whether this will lead to an over-extensive protection of computer programs in the UK’. 

Significantly, in the German Copyright Law (Urheberrechtsgesetz) 1965, Article 69(a) was enacted in order to implement the Directive and to reject the ‘level of creativity’ approach taken by the Bundesgerichtshof in Inkasso Program and Betriebssystem.

Databases

According to the European Commission’s First Evaluation of the Database Directive, all 25 Member States have transposed the Directive into national law. However, UK implementation is arguably incomplete in two key ways. First, insofar as a ‘database’ is classed as a ‘literary work’, this suggests a limitation on the types of works, data or other materials that can form part of a database. Second, section 3(1)(a) of the CDPA retains a sub-category of ‘a table or compilation other than a database’, to which the lower standard of originality of ‘labour, skill and judgment’ applies. As such, Estelle Derclaye has suggested that section 3(1)(d) and the words ‘a literary work consisting of’ in section 3A(2) of the CDPA should be deleted and that the originality standard of ‘author’s own intellectual creation’ should apply also to tables and compilations. Alternatively, English courts could seek to interpret broadly

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94 Ibid.
95 Ladbroke (Football) Ltd v William Hill (Football) Ltd [1964] 1 WLR 273.
96 Software Report, p. 10.
97 Ibid.
100 (1991) 22 IIC 723.
102 Database Report, para 4.1.1.
105 Ibid., 474.
the definition of ‘database’ in section 3A, and apply the originality test of ‘author’s own intellectual creation’ to all databases, tables and compilations, on the basis that this is consistent with the Database Directive and does not conflict with any express provisions in the CDPA.

As the Database Report notes, courts in various Member States have interpreted what counts as a ‘database’ broadly to include listings of telephone subscribers, compilations of case law and legislation, websites containing lists of classified advertisements, catalogues of various information, and news websites. As discussed above, the ECJ has held football fixture lists to constitute a ‘database’. It seems that the divergences in national law relate to whether the threshold requirement for the *sui generis* right of substantial investment has been met, as opposed to whether subject matter constitutes a database or not.

5. Future harmonization/unification?

In this section, the necessity and desirability of further EU harmonization of subject matter is considered. In particular, whether a shared definition of ‘computer program’ should be adopted, along with an ‘open list’ approach to subject matter.

*Harmonization of the definition of computer program*

As discussed above, there is no Community definition (either in the Software Directive or through ECJ rulings) of ‘computer program’. Can it be said that such a definition is needed or desirable? It is submitted that Member States have not produced widely diverging interpretations of what constitutes a ‘computer program’, so that such a definition is not necessary. Nonetheless, it might be considered desirable to introduce such a definition, particularly with a view to clearly demarcating the boundary between protection of computer programs and databases. This view is unpopular with the European Commission, which is against inserting a definition of ‘computer program’ into the Software Directive on the basis that any advantage of certainty or accuracy would be outweighed by the risk of the definition becoming outdated.

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109 Database Report, para 4.1.2.
by developments in technology.110 This seems a valid point, although it could be countered by drafting the definition in wide, technology neutral terms. Arguably, the definition of ‘computer program’ in the US Copyright Act 1976 is an example of this approach.111 Section 101 of the Act defines a ‘computer program’ as ‘a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result’.112 But it may be argued that courts would, in any event, adopt this sort of definition.113 Further, it is questionable how much guidance this type of definition actually gives – it does not, for example, indicate whether word commands per se or macro commands qualify as a ‘set of instructions’.114 The difficulty of defining a ‘computer program’ in any meaningful way that will avoid becoming outdated is also highlighted by the fact that English courts and the EPO Boards of Appeal have studiously avoided defining what is a computer program for the purposes of the patentability exclusion in section 1(2)(c) of the Patents Act 1977 (UK) and Article 52(c) of the European Patent Convention.115 Thus, we may conclude that it is both unnecessary and impractical to introduce a harmonized definition of ‘computer program’ for the purposes of copyright protection.

Unified approach – open list versus closed list

The question addressed by this section is whether or not, at an EU level, there should be a unified approach to subject matter, in the form of either a ‘closed list’ or an ‘open list’. This question will be explored by considering the advantages and disadvantages of both approaches.

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111 Along with the definition in s1 of WIPO Model Provisions: ‘“computer programs” means a set of instructions capable, when incorporated in a machine-readable medium, of causing a machine having information-processing capabilities to indicate, perform or achieve a particular function, task or result’.

112 This is also the definition adopted in s10(1) of the Australian Copyright Act 1968 (Cth).

113 See Laddie et al (2000), para 34.19, who suggest that an industry definition along similar lines would be used by courts.

114 Thus, Australian courts still had to determine this question: see Data Access Corporation v Powerflex Services Pty Ltd (1999) 202 CLR 1. Although, note that the High Court of Australia was considering the previous definition of ‘computer program’ in s10(1) prior to the amendment introduced by the Copyright Amendment (Digital Agenda) Act 2000 (‘DAA’), schedule 1, item 7. Both definitions refer to a ‘set of instructions’.

In terms of the ‘closed list’ approach, a key advantage is certainty, since the types of subject matter that are protected by copyright law can be readily identified, by virtue of the categories that are stipulated. This certainty is further assisted, to some extent, by the statutory definitions associated with those categories that were discussed in Section 2.

The second main advantage of the ‘closed list’ approach is that of restraint. In other words, ensuring that copyright law is not inappropriately expanded to protect particular creations. The best example of this is the protection of the scent of perfumes. The Supreme Court of the Netherlands (First Chamber) held in Kecofa v Lancôme\textsuperscript{116} that the perfume Trésor qualified for copyright protection under the Netherlands Copyright Act 1912 and that the defendant’s fragrance, Treasure, was an unlawful reproduction. A similar decision was reached by the Cour d’Appel de Paris (Fourth Chamber) in L’Oréal SA v Bellure NV\textsuperscript{117}, although the French Cour de Cassation held to the contrary in Bsiri-Barbir v Haarmann & Reimer\textsuperscript{118}. These decisions have ignited controversy and attracted criticism from commentators\textsuperscript{119}. It is reasonably safe to say, however, that under a ‘closed list’ approach such as that adopted in the UK, it would be extremely unlikely that perfumes would qualify for protection. For this to occur legislative amendment would be necessary and this would be preceded by debate about the merits of extending copyright protection to such subject matter.

The ‘closed list’ approach, however, has been criticized on two main grounds. Professor Andrew Christie has argued that categorization of copyright works under a ‘closed list’ creates gaps in protection and ‘some of these gaps constitute unjustifiable discrimination’\textsuperscript{120}. He cites Creation Records v News Group Newspapers\textsuperscript{121} as an example. In this case, an ensemble of objects was arranged by Noel Gallagher for the purposes of a ‘photo-shoot’, the results of which would be used for the front sleeve of the Oasis album ‘Be Here Now’. The defendant newspaper engaged a freelance photographer to

\textsuperscript{118} [2006] ECDR 28.
\textsuperscript{121} Creation Records v News Group Newspapers [1997] EMLR 444.
take an unauthorized photograph of the scene, which it subsequently published and offered for sale. In an action for an interlocutory injunction restraining further publication of the photograph, Lloyd J held that no copyright subsisted in the ‘photo-shoot’ scene since the scene itself could not be categorized as a dramatic work or as an artistic work, in the form of a sculpture, collage or work of artistic craftsmanship. Professor Christie argues that this outcome offends against policy since the intellectual and manual effort applied to creating the photo-shoot scene reflected significant creativity and was more deserving of protection than a photograph of the scene.

A second criticism made by Professor Christie is that a ‘closed list’ categorization of subject matter leads to a degree of technological specificity. As a result, it is unclear whether new types of works, such as multimedia, can be brought within the existing categories.

Several responses to these criticisms may be made. First, the ‘gap’ in protection said to be exemplified by *Creation Records* can be explained on grounds other than adopting a ‘closed list’ approach to subject matter. One interpretation of cases such as *Creation Records* and also *Merchandising Corporation of America v Harpbond* is that judges in fact hold ‘traditional’ views about ‘art’ and artistic works, which impact on the way in which they interpret the existing definitions in the CDPA. As such, a more ‘open-minded’ approach would lead to more generous interpretations of ‘collage’, ‘sculpture’

122 The scene is described by Lloyd J in *Creation Records v News Group Newspapers* [1997] EMLR 444 at 447: ‘[there is a] swimming pool in the foreground with the Rolls Royce seemingly emerging from the water towards the camera. The hotel is beyond and to the right. In the far distance is a wooded area with a partly clouded sky above. The five members of the group are posed round the pool, one on a scooter, one climbing out of the pool and others with or near other objects seemingly unrelated to each other.’

123 *Creation Records v News Group Newspapers* [1997] EMLR 444 at 448–50. The scene was not a dramatic work because it was ‘inherently static, having no movement, story or action’ (at 448). The scene was not a sculpture because ‘no element in the composition has been carved, modelled or made in any of the other ways in which sculpture is made’ (449) and it was not a work of artistic craftsmanship because the scene did not seem to result from the exercise of any craftsmanship and, but was merely an assembly of objects (449). The scene was not a collage because it did not involve ‘the sticking of two or more things together . . . [but were] random, unrelated and unfixed elements’ and the ‘composition was intrinsically ephemeral’ (450). However, the claimants were successful in obtaining an injunction on the basis of breach of confidence: see Lloyd J at 455.

125 Ibid., 30.
126 Ibid.
and ‘painting’. That courts are becoming less ‘traditional’ in their views is perhaps demonstrated by Mummery LJ’s dicta in Sawkins v Hyperion (quoted above in Section 2)\(^\text{128}\) where a reasonably broad definition is given to ‘musical work’.\(^\text{129}\)

An alternative interpretation of the cases comes from Anne Barron, who suggests that Creations Records is typical of the ‘materialist’ approach of the courts to defining an ‘artistic work’.\(^\text{130}\) This approach is:

...to focus on the physical embodiments through which visual representations of that type are ‘normally’ made manifest, and upon the technical processes which ‘normally’ (i.e. as a matter of ordinary common sense) yield physical items corresponding to the entities mentioned in section 4 [of the CDPA]. In other words, their judgements have proceeded from the aesthetically neutral features of entities assigned by ordinary language use to the classifications within the category, with no reference to whether these entities can claim the status of ‘art’.\(^\text{131}\)

Ms Barron argues that the courts are driven towards this approach ‘as a by-product of copyright law’s pursuit of certainty, objectivity and closure’.\(^\text{132}\) In other words, it is the courts’ desire to avoid making subjective, aesthetic judgments about what constitutes ‘artistic’ works that leads to defining them in technical or materialist terms. However, a consequence of this approach is that large swathes of contemporary art may be excluded from the definition of ‘artistic work’.\(^\text{133}\) If Ms Barron’s analysis is correct, then it seems that English courts could avoid this result by modifying their approach to defining artistic works.\(^\text{134}\)


\(^{129}\) See also Brown v Mcasso Music Production Ltd [2005] FSR 40, paras 45–6 where Judge Fysh QC, held that in the case of rap music, the ‘words depended upon inter alia correct vernacular usage, fitting chosen words into the backing and in the overall idiom itself’ such that the claimant was held to have contributed sufficient skill and judgment in the collaboration to make him a joint author of the lyrics of a song.


\(^{131}\) Ibid., 373–4.

\(^{132}\) Ibid., 381, who explains that ‘in order to position an intangible entity as an object of property, the law must be able to see it as identifiable and self-sufficient, attributable to some determinate author, and perceptible to the senses through the physical medium in which it is recorded or embodied’. She also argues that that this way of thinking about artistic works has striking parallels in art theory, in particular Modernist art theory.

\(^{133}\) Ibid., 372, 374, 380–81, 397.

\(^{134}\) In the context of musical works, Richard Arnold QC has suggested a definition along the lines of what is consumed as music: see Arnold, R, Performers’ Rights (3rd edn., London: Sweet & Maxwell, 2004). A similar sort of approach could be adopted for artistic works.
Although the existing categories in the CDPA are ‘closed’, it appears that they can operate in an ‘open-ended’ manner. This is illustrated, for example, by the absorption of computer programs into the category of ‘literary works’ and the protection of cinematographic works as ‘dramatic works’. Further, in respect of new technological works, such as multimedia, a significant (although not perfect) amount of protection can be achieved via the sub-categories of ‘database’ and ‘computer program’ and the categories of ‘film’, ‘artistic works’ and ‘dramatic works’.

That said, it has been argued that this sort of expansive interpretation of existing categories leads to distortions and inconsistencies. The most recent example of this is the characterization of cinematographic works as ‘dramatic works’ in Norowzian v Arks (No 2).

While such an interpretation of ‘dramatic works’ permits an appropriate scope of protection for cinematographic works that is currently not available under the ‘film’ category, it creates various problems when it comes to ascertaining authorship and length of protection of such works and ensuring consistency with the obligations contained in the Term Directive.

When it comes to an ‘open list’ approach, several key advantages exist. First, subject matter will not be excluded simply because it does not fit within the existing enumeration. New technological works, such as multimedia, works of contemporary art and characters per se may qualify as copyrightable subject matter. As such, there is greater flexibility in the system and comprehensiveness of protection. Second, since it is not necessary to fit subject matter within specific categories, open list systems avoid the sorts of interpretive gymnastics that we see in closed list systems, such as the UK. For example, in the case of multimedia works, these qualify as ‘works of the mind’ under the French IPC whereas in the UK, there is the need methodically to investigate which, if any, of the eight categories of works can protect multimedia works. As such, we can say that ‘open lists’ provide for greater simplicity and ease of application.

These advantages, however, also have their downsides. Flexibility and comprehensiveness of protection may come at the cost of coherence. More specifically, there may be instances where creations are inappropriately protected.

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137 E.g. ‘Wrapped Reichstag – Christo’ (2003) 34 IIC 570.
139 For such an investigation see Aplin (2005), ch 3.
welcomed into the copyright fold. One example of this is the recent case, *Kecofa v Lancôme*, 140 in which the Netherlands Supreme Court held that a scent of a perfume may qualify for protection under copyright law. The ‘open list’ of subject matter in the Netherlands Copyright Act 1912 was a persuasive factor in reaching this conclusion, together with the fact that the scent was perceptible, original in character and bore the personal stamp of the maker. 141

The decision has been criticized on several grounds. First, that the framers of the Netherlands Copyright Act 1912 ‘only had those works in mind which can be perceived by two of the five human senses, sight and/or hearing’. 142

Further, that the Netherlands is now at odds with other Member States (notably France). Finally, that protecting the scent of perfume will require ‘considerable creativity to apply certain acts of copyright infringement (e.g. distribution, making available to the public)’. 143

Another example of an unwarranted extension is the protection of a ‘kinetic scheme’ by the Netherlands Supreme Court in *Technip Benelux BV v Ariër Gerhard Goossens*. 144 A ‘kinetic scheme’ is a schematic representation of chemical equations, which in this case was used in connection with a computer program for simulating the production process of ethylene and propylene in the petrochemical industry. The legal issue before the Netherlands Supreme Court was not protection of the computer program, but whether the kinetic scheme as such could be protected as a ‘work’. The Court held that the kinetic scheme *was* eligible for copyright protection, since the selection of the data, in view of either including them in the kinetic scheme or not, demonstrated its own, original character and bore the personal stamp of the author. Professor Quaedvlieg has criticized this decision, on the basis that: ‘it goes against the spirit of [Art 9(2) TRIPS] to protect a scheme which is intended to perform a central function in a method of operation and which, as to its nature, is close to representing the mathematical concept of the reaction it describes – if it is not just that’. 145

On the other hand, an ‘open list’ does not automatically embrace everything and inappropriate subject matter has, on occasions, been filtered out. For example, in Germany, the Bundesgerichtshof held that a format for a television series is not susceptible to copyright protection. 146 The Court stated that ‘[c]opyright does not protect all results of individual mental activity, but only

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141 Ibid., para 25.
143 Seville (2007), 51.
144 (2007) 38 *IIC* 615.
145 Comment (2007) 38 *IIC* 618, 621.
works within the meaning of Sec. 2 of the Copyright Act’. A television format – which the Court defined as ‘the sum total of all its characteristic features that are apt to shape the basic structure of the program’s episodes regardless of their different contents, and that at the same time make it possible for the public to recognize them at once as part of a series’ – was held not to be a work within Article 2 of the German Copyright Law (Urheberrechtsgesetz) 1965. This was because it was not the ‘creative forming of a certain material’ but simply ‘a mere set of instructions, separated from its content’ which did not ‘even contain anything of the essence of the individual shows that are created on the basis of its formula’. Interestingly, it should be noted that under the ‘closed list’ approach a similar conclusion regarding television formats has been reached.

In terms of simplicity and ease of application of the law, while this may exist at the initial categorization level, it is wrong to think that ‘open list’ systems avoid classification entirely. Some, albeit minimal, degree of classification is required at the subject matter stage, in order to determine the applicability of other provisions. For example, in relation to ‘audiovisual works’ there are special provisions in the French IPC regulating moral rights and audiovisual production contracts, which would necessitate a court initially identifying whether the work involved is ‘audiovisual’. Further, while classification may be generally avoided at the subject matter stage, it still arises when it comes to determining the type of co-operation between the contributors to the work and who is considered as the author/s and owner/s of the work. Thus, in France, works may be characterized as composite, collective or collaborative and in the past we have seen

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147 Ibid., 35 IIC 987, 989.
148 Ibid.
150 IPC, Arts L121-5, 121-6.
152 Art L113-2 of IPC defines ‘composite work’ to mean ‘a new work in which a pre-existing work is incorporated without the collaboration of the author of the latter work’.
153 Art L113-2 of IPC defines ‘collective work’ to mean ‘a work created at the initiative of a natural or legal person who edits it, publishes it, and discloses it under his direction and name and in which the personal contributions of the various authors who participated in its production are merged in the overall work for which they were conceived, without it being possible to attribute to each author a separate right in the work as created’.
154 Art L113-2 of IPC defines a ‘work of collaboration’ to mean ‘a work in the creation of which more than one natural person has participated’.

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disagreement over the status of audiovisual works and multimedia works.\textsuperscript{155}

From the above discussion, it is obvious that the ‘closed list’ and ‘open list’ approaches each have their strengths and weaknesses. However, given that most Member States adopt an ‘open list’ approach, this in itself might create pressure for the UK and Ireland to abandon their ‘closed list’. Two notes of caution should be sounded here. First, in terms of the ‘closed list’ systems, some of the disadvantages that have been highlighted could be minimized by clearer statutory definitions, more generous judicial interpretations and by abolishing fixation as a subsistence requirement (but retaining it as an evidential one). Second, it is not clear that adopting an ‘open list’ approach to copyright subject matter will avoid issues of classification and analogies with enumerated works in the common law Member States. For example, in the United States, section 4 of the Copyright Act 1909, in referring to ‘all writings of the author’, had an ‘open list’. Even so, section 5 of the 1909 Act enumerated classes of works for the purposes of registration and, on various occasions, the legislature had to intervene to expand the list.\textsuperscript{157} The US Copyright Act 1976, which radically reformed US copyright law,\textsuperscript{158} also adopts an ‘open list’: section 102(a) of the 1976 Act states that it protects ‘original works of authorship’ and provides a non-exhaustive list of protectible subject matter. Yet history shows that new works, such as computer programs and video games, have been fitted within the categories enumerated in the non-exhaustive list of subject matter, as opposed to being protected simply on the

\begin{itemize}
\item \textsuperscript{155}In the past, disagreement has also arisen over whether audiovisual works should be classed as collective or collaborative: Pollaud-Dulian, F, ‘The Authors of Audiovisual Works’ (1996) 169 RIDA 51. It is now accepted that they are collaborative works.
\item \textsuperscript{157}As amended at 1972: ‘(a) Books, including composite and cyclopedic works, directories, gazetteers, and other compilations. (b) Periodicals, including newspapers. (c) Lectures, sermons, addresses (prepared for oral delivery). (d) Dramatic or dramatico-musical compositions. (e) Musical compositions. (f) Maps. (g) Works of art; models or designs for works of art. (h) Reproductions of a work of art. (i) Drawings or plastic works of a scientific or technical character. (j) Photographs. (k) Prints and pictorial illustrations including prints or labels used for articles of merchandise. (l) Motion-picture photoplays. (m) Motion pictures other than photoplays. (n) Sound recordings.’ The works in italics were added by subsequent amendments to the 1909 Act.
\item \textsuperscript{158}For a discussion see Marke, J, ‘United States Copyright Revision and its Legislative History’ (1977) 70 Law Library Journal 121.
\end{itemize}
basis that they were original works of authorship. In the case of computer programs, the Commission on New Technological Uses of Copyrighted Works (CONTU) recommended that ‘computer program’ be explicitly referred to in the legislation, and Congress adopted this amendment in the US Computer Software Copyright Act 1980. In relation to video games, US courts variously protected them as literary works (in terms of the underlying computer program) or as audiovisual works. Despite an ‘open list’ approach, it may be that common law traditions are such that drawing analogies with well-recognized forms of subject matter is inevitable because this adds to the legitimacy of a claim that new subject matter is an ‘original work of authorship’.

Conclusion
EU harmonization of what constitutes protectable copyright subject matter has, on the whole, been fairly limited. The most significant harmonization to date has occurred in relation to databases, given that Article 1(2) of the Database Directive sets out an express, exhaustive definition of ‘database’. This chapter has shown that the definition is broad, but bounded, and discussed the guidance as to its scope provided by recent ECJ rulings. There has also been EU harmonization of computer programs, but aside from stipulating that a computer program must include preparatory design material no attempt is made in the Software Directive exhaustively to define this type of subject matter. This chapter considered the necessity and desirability of introducing a definition of ‘computer program’ into the Software Directive and concluded that it was both unnecessary and unfeasible. Finally, this chapter highlighted a key difference between common law and civil law Member States when it comes to subject matter, namely, the ‘closed’ versus ‘open’ list approach. It examined both approaches and concluded that each has their advantages and disadvantages. If the EU were considering whether to have a unified approach, undoubtedly the inclination would be to follow the majority of Member States and adopt an ‘open list’ of subject matter. However, based

on the experience in the US, the likely impact on how common law Member States approach subject matter may be queried. What would have greater effect is arguably twofold: more generous judicial interpretation of definitions and the abandonment of fixation as a subsistence requirement.